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United States Patent [19]**Knutson et al.**[11] **Patent Number:** **5,861,386**[45] **Date of Patent:** **Jan. 19, 1999**[54] **METHOD FOR TREATING AND PREVENTING SECONDARY HYPERPARATHYROIDISM**[75] Inventors: **Joyce C. Knutson**, Madison; **Charles W. Bishop**, Verona; **Richard B. Mazess**, Madison, all of Wis.[73] Assignee: **Bone Care International, Inc.**, Madison, Wis.[21] Appl. No.: **907,658**[22] Filed: **Aug. 8, 1997****Related U.S. Application Data**

[63] Continuation of Ser. No. 798,958, Feb. 11, 1997, Pat. No. 5,707,980, which is a continuation of Ser. No. 415,488, Apr. 3, 1995, Pat. No. 5,602,116, which is a continuation-in-part of Ser. No. 119,895, Sep. 10, 1993, Pat. No. 5,403,831, which is a continuation of Ser. No. 812,056, Dec. 17, 1991, abandoned, which is a continuation of Ser. No. 569,412, Aug. 17, 1990, Pat. No. 5,104,864, which is a continuation of Ser. No. 227,371, Aug. 2, 1988, abandoned.

[51] **Int. Cl.⁶** **A61K 31/59**[52] **U.S. Cl.** **514/167**[58] **Field of Search** **514/167**[56] **References Cited****U.S. PATENT DOCUMENTS**

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A method for preventing loss of bone mass or bone mineral content in a human being suffering from secondary hyperparathyroidism by administering a sufficient amount of 1 α -OH vitamin D₂, 1 α ,24(S)-(OH)₂ vitamin D₂, 1 α -OH vitamin D₄ or 1 α ,24(R)-(OH)₂ vitamin D₄.

14 Claims, No Drawings